9-64 Channel Fiber Optic
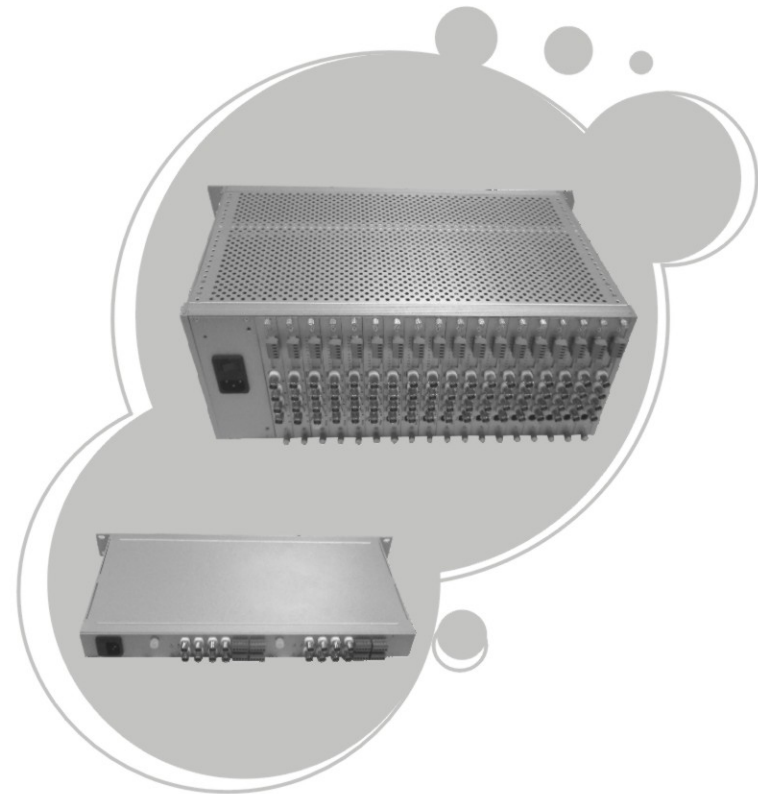# Video/Data/Audio/Ethernet/Telephone Multiplexer

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User's Manual

(Do not use until you read this manual carefully.)

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MANUAL FOR SAFELY USING

⚠️ **BE CAREFUL !**
WARNING THIS LABLE REMINDS YOU THIS EQUIPMENT MAY DO HARM TO YOU .

⚡ **TAKE CARE OF ELECTRIC SHOCK !**
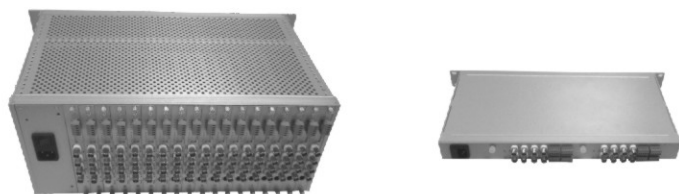WARNING　THIS LABLE REMINDS YOU THIS EQUIPMENT MAY DO HARM TO YOU OR YOUR PROPERTY.

◎ MANUAL FOR SAFELY-USING

In order to prevent any damages to the property of you or others ,do please follow the manual for safely using . Although this equipment is designed reliably and safely , please try your best to prevent any damages to it .

1. Please read this manual carefully and keep it well for your futher information .

2. Please place the equipment where it will not be subjected to rxtreme temperatures or humidity as this equipment is electric device .

3. Do not try to knot the cables of power supply or put anything on them . Please place them where it will not be touched easily .

4. Please make sure the connections between power plug and other devices are fully valid .

5. Please follow the marks on the equipment when connect the power supply , and the power supply should meet the following rules :
   - (1.) Input AC :220V (165V-260V) ,50Hz
       Input DC :-48V ,-24V ,-12V
   - (2.) Output DC :5V ,2A
   - (Remark:This equipment can be used with standarded power adaptor only.)

6. Please shut down the power supply immediately and get in touch with us or your authorized reseller when the following things happen :
   - (1.)The equipment is drowned in water or another liquid.
   - (2.)The equipment or the coat is broken down .
   - (3.)The equipment works abnormally .
   - (4.)The equipment is smelled or noisy or smoky .

7. Do not try to maintain the equipment by yourself , unless there are clear instructions in this manual.

8. Please install special device to pervent damages caused by lightning when use the equipment in open outdoor .

PRODUCT OVERVIEW

Our 9-64 channel video multiplexers can simultaneously transmit 9-64 channels of 10-bit digitally encoded broadcast quality video/return or bidirectional data /unidirectional or bidirectional audio / Ethernet / Telephone /Switching value over one multimode or singlemode optical fiber. These multiplexers are typically used in applications where the cameras have P/T/Z capabilities. Plug and play design ensures the ease of installation and operation. Electronic and optical adjustments are never required. LED indicators are provided for instantly monitoring system status. Devices are available for either standalone or rack-mount installation ,which is suitable for different working environment.

PRODUCT CHARACTERISTICS

◎ 10-bit digitally encoded and non-compression broadcast quality video transmission

◎ Support any high-resolution video signal

◎ Directly compatible with NTSC,PAL and SECAM CCTV camera systems and support RS-232,RS-422,and RS-485 data protocols

◎ Power supply and other parameter state indication, which can monitor the operation condition of system

◎ Support no-damage regenerative trunk of video

◎ Constant input optical power, and large dynamic range, No Electrical or Optical Adjustments Required.

◎ Special ASIC design .

◎ Industry-grade of operating temperature from -40℃ to 85℃,which is applied to the different working environment

◎ Hot-swap function

◎ Can be installed in 19 inchs rack-mounted chassis (4U)

TECHNOLOGY CHARACTERISTICS

OPTICAL CHARACTERISTICS

Fiber connector	FC/SC/ST
Transmission distance	550M-80Km
Wavelength	1310/1550nm

VIDEO CHARACTERISTICS

Video interface form:	BNC
Video input / output impedance:	75 Ω(imbalance)
Video input/output voltage :	1V pp (typical value) 1.5 V pp(max value)
Bandwidth of video :	5MHz-7.5 MHz
Automatic compatible video system :	PAL SECAM NTSC
Differential gain:	（10%-90%APL） DG <1% (typical value)
Differential phase:	（10%-90%APL） DP <0.7 ° (typical value)
Weighted signal-to-noise ratio:	S/N ≥70dB

DATA CHARACTERISTICS

Interface Port:	RJ-45 industrial standard port
Interface Signal Type:	RS-232 /RS-422 /RS-485 /Manchester
Code rate:	0～400Kbps
BER:	≤ 10⁻⁹

AUDIO CHARACTERISTICS

Interface port:	RJ-45 Lotus Block industrial standard port
Audio input / output impedance:	600Ω (Balance/Imbalance)
Audio input / output voltage :	2Vpp (typical value)
Audio input / output level :	0 dbm (typical value)
Audio Bandwidth :	10Hz～20kHz
Audio Digital Bandwidth :	24 bit
Audio signal-to-noise ratio:	S/N≥95dB (weighted)

SWITCHING VALUE CHARACTERISTICS

Interface Port:	RJ-45 industrial standard port
Signals input :	Alarm or switching value input ,support TTL , RS-232/422/485 or switches ,buttons .
Signals output :	Alarm or switching value output ,support TTL , RS-232/422/485 or Contact Relay output

OTHER NORMAL CHARACTERISTICS

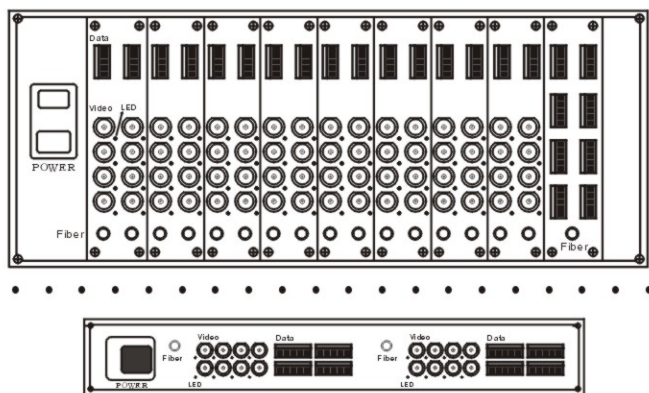|	
Operating Temperature	-40℃ +85℃
Humidity	0～95% non-condensing
Operating Voltage	DC 5V/2A
MTBF:	≥ 10⁵ hours

APPLICATIONS

◎ Intelligent Transportation System
◎ Connection of Sub-network for Surveillance Center
◎ Public Security Surveillance
◎ High Way & Toll Station Surveillance
◎ High Quality Video Conference
◎ Industrial Closed Circuit Television Surveillance
◎ Coliseum using for TV-live ,audio transmission
◎ Military sector

PANEL OF OPTICAL TRANSMITER

TABLE OF FRONT PANEL

Please see the Video interface port BNC , fiber port ,LED lamps and data port as the following table showing:

Video interface :

Video 1 , Video 2 · · · · · · Video 64 , Video signals input

Fiber port :

Interface for optical fiber (Warning :Do not see directly the fiber interfact when using !)

LED lamps :

PWR : LED lamp for power supply (when turn the power on ,this lamp will be on and red ,when shut down the power ,this lamp will be off .)

LED 1 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

LED 2 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)
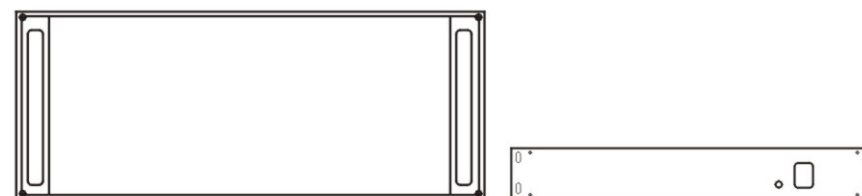
LED 3 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

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LED 64 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

TABLE OF BACK PANEL
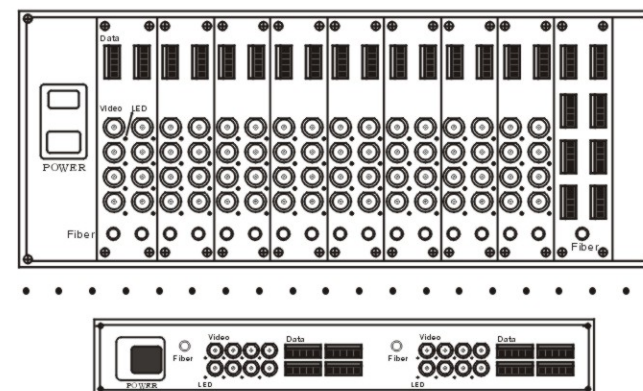
Pease see the power interface as the following table showing:

Video digital optical converter on this type use external power supply of AC220V .

PANEL OF OPTICAL RECEIVER

TABLE OF FRONT PANEL

Please see the Video interface ports BNC , fiber port ,LED lamps and data ports as the following table showing:

Video interface :

   Video 1 , Video 2,-------- Video16,Video signals input BNC.

   Video 1 , Video 2 ,-------- Video64,Video signals input BNC

Fiber port :

   Interface for optical fiber   (Warning :Do not see directly the fiber interfact when using !)

LED lamps :

   PWR : LED lamp for power supply (when turn the power on ,this lamp will be on and red ,when shut down the power ,this lamp will be off .)

   LED 1 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

   LED 2 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

   · · · · · ·

   LED 64 : LED lamp for video (when get video signals,this lamp will be on,when no video signals ,this lamp will be off or blink .)

TABLE OF BACK PANEL

   The optical receiver has the same back panel as the optical transmiter , please kindly see this on TABLE OF BACK PANEL for optical transmiter .

SPECIFICATIONS FOR POWER SUPPLY

If you want to prepare power supply by youeself ,please make sure the power supply you select meet the following requirements :

   1. AC power supply ,power upto 10W , output 5V/2A .

   2. Electric Ripple≤100 mV

   3. The power supply you select should be applied to the working environment.
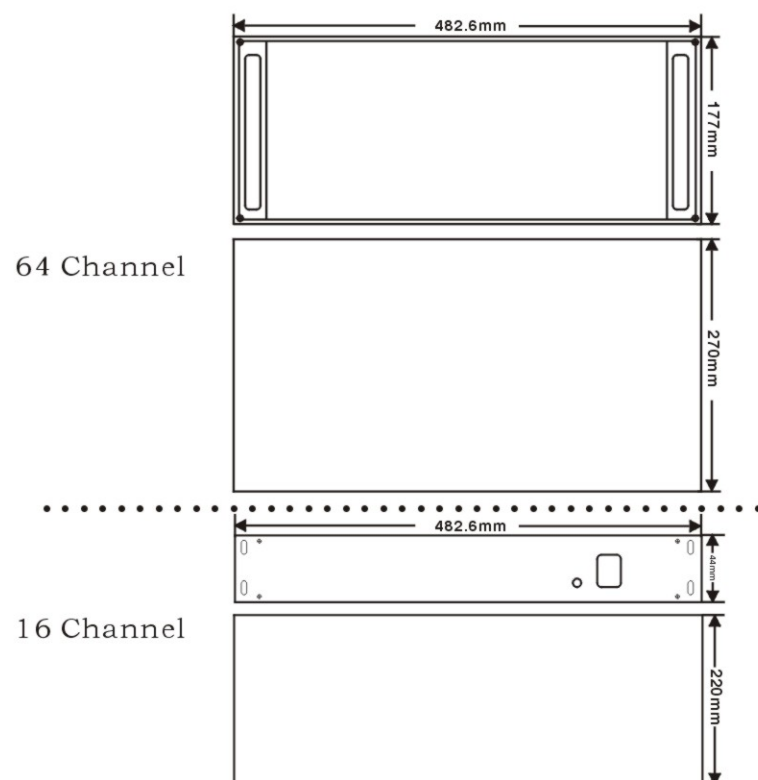
INSTALLATION

1. NOTE BEFORE INSTALLATION

(1.) When you unpack this product package ,you will find the items listed below : 1pc optical transmiter ; 1pc optical receiver ; 2pcs power adaptors (no this item when user prepare power supply by theirselves.) ;1pc user's manual copy . Please inspect the contents ,and report anyapparent damage or missing items immediately to your authorized reseller .

(2.)Please read this manual carefully before installation .

(3.)Please read the manual for safely-using carefully .

(4.)Do not try to dismantle the equipment without authorization form us .

(5.)Please check the lables of item number on the equipment carefully .(By "T" it means optical transmiter , by "R" it means optical receiver .)

(6.)The optical transmiter is the device to change video signals ,audio signals or data signals into optical signals and then transmit with optical fiber . So this equipment is typically connected to camera have PTZ or other video options .

(7.)The optical receiver is the device to receive optical signals and then change them into video signals ,audio signals or data signals . So this equipment is typically connected to monitor or monitor-matrix .

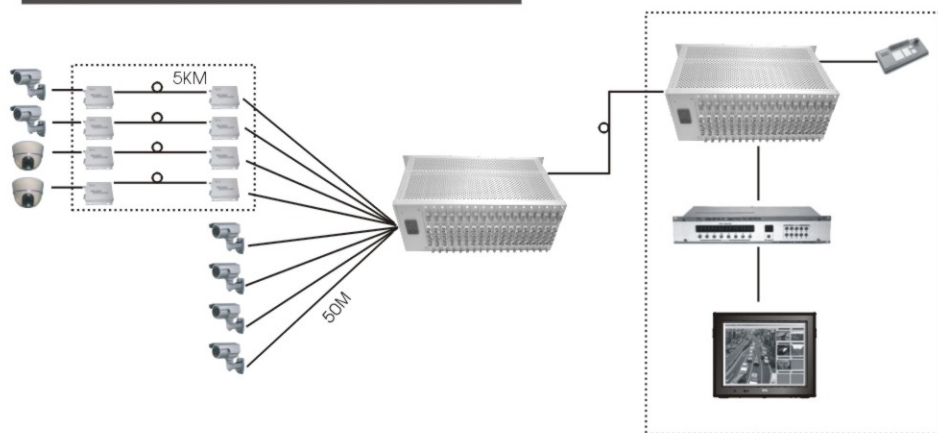(8.)The video interface of optical transmiter has corresponding vide interface of the optical receiver .

2. INSTALLATION STEPS

(1.) Connect the video interface of optical transmiter to camera have PTZ or other video options . Then connect the optical fiber to the fiber port , and connect the power supply .

(2.) Connect the video interface of optical receiver to monitor or monitor-matrix . Then connect the optical fiber to the fiber port , and connect the power supply .

EXTERNAL DIMENSIONS

64 Channel

482.6mm

177mm

270mm

482.6mm

44mm

16 Channel

220mm

NETWORKING SCHEME

5KM

50M

RESPONSIBILITY NOTE

(1.) The user should cover the damage during transport to equipment resend for maintained at the user's own expense .

(2.) Please contact your authorized reseller immediately , if there is any damage to the equipment during transport .

(3.) If you want to prepare power supply by youeself ,please make sure the power supply you select meet the requirements given by this manual .We will not cover the damage caused by your using unqualified power supply .

(4.) Do please follow this manual when using the power supply .

(5.) All rights reserved. No part of this manual can be reproduced , or transmitted in any form or by any means, without authorization form us .

(6.) We will not cover the damage to the equipment or any person casued by your changing the equipment or this manual in any form without authorization from us .

(7.) We will change the equipment for new ones if it can not work normally because of the qulity itself within the warranty time . We will keep the old ones .

(8.) The packages of the equipment meet the requests of environmental protection ,should be recycled .

Attention : If there are any printing mistakes in this manual ,the right to explain is reserved.And the pictures of equipment appearance in this manual are just for user's information,the final equipment appearance depends on reality products,if there are any improvements on techonlogy ,we will be sorry for won't inform you again .